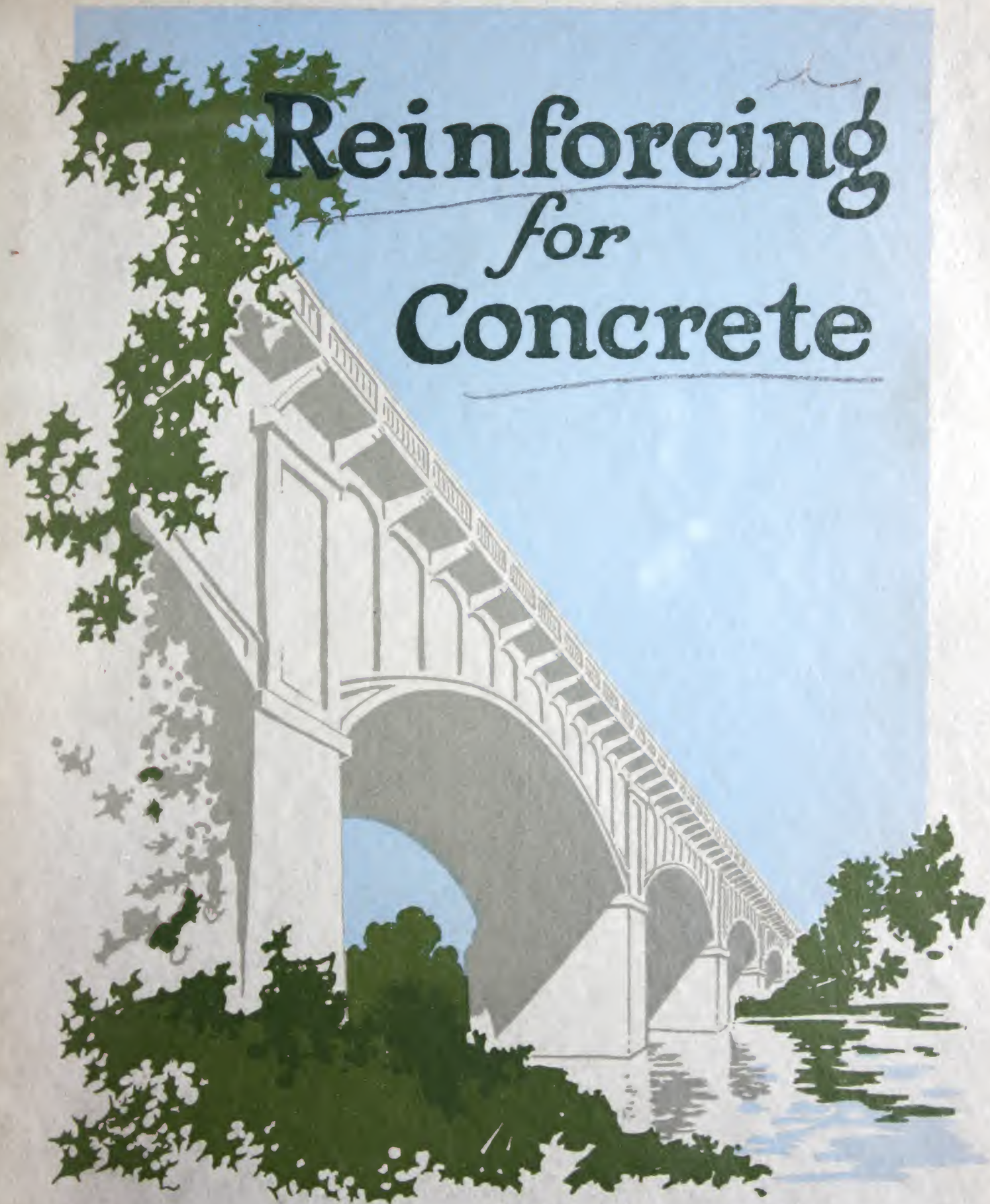
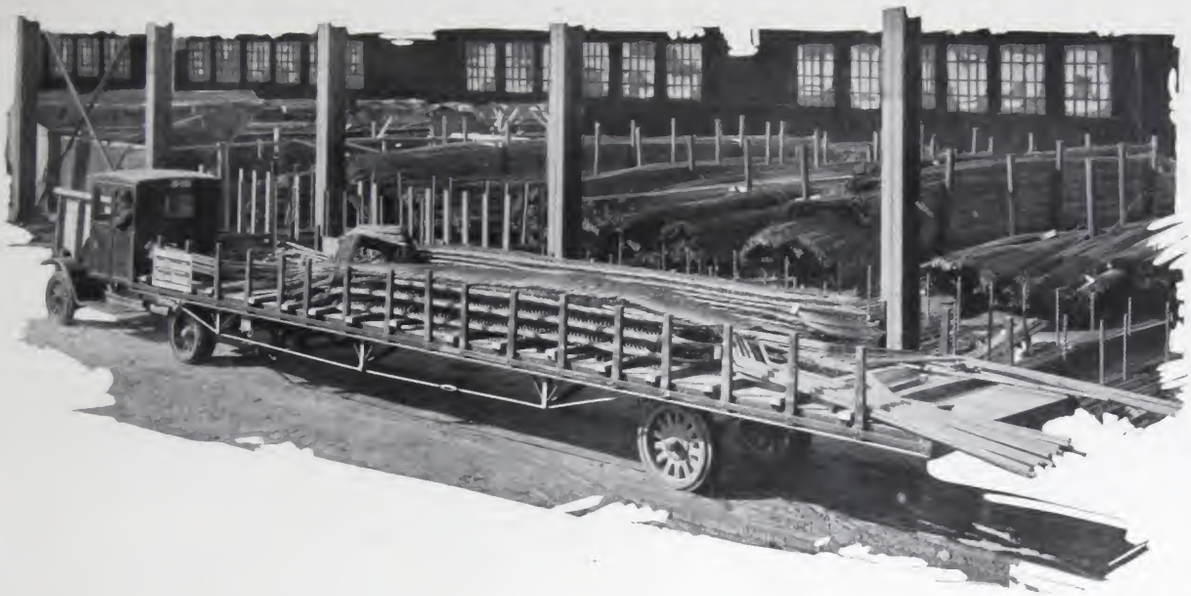
135-37

Reinforcing *for* Concrete



JOSEPH T. RYERSON & SON INC.

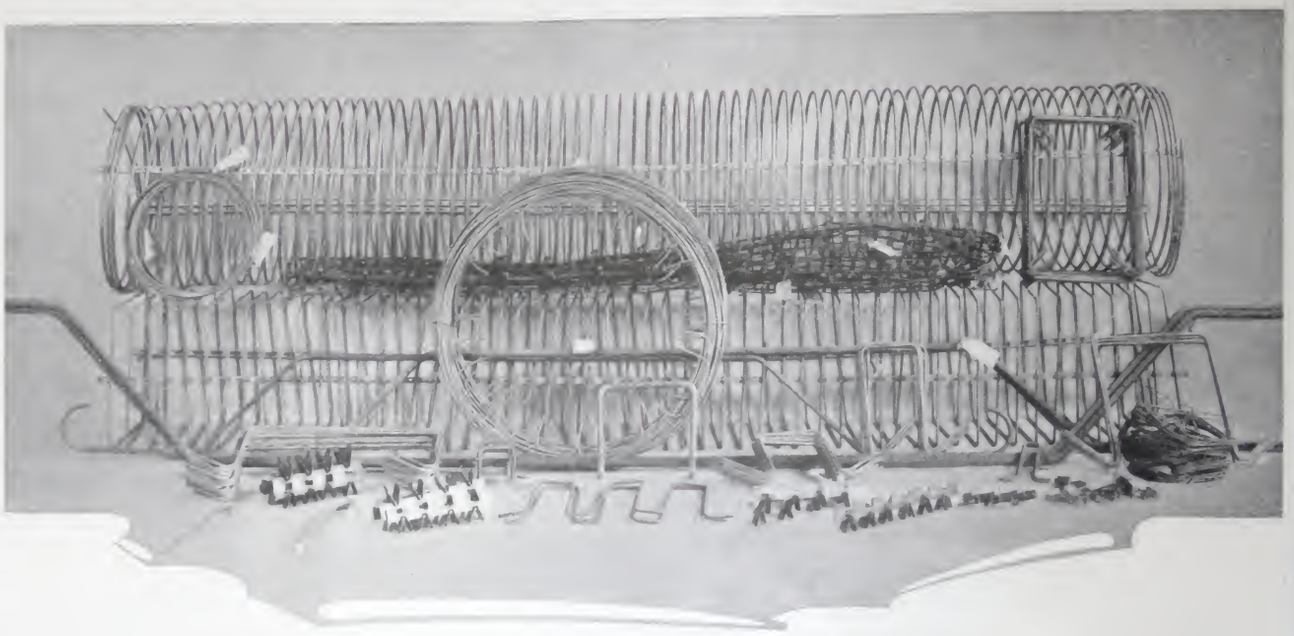
CHICAGO ST. LOUIS CINCINNATI DETROIT BUFFALO NEW YORK



Ryerson Concrete Reinforcing Service

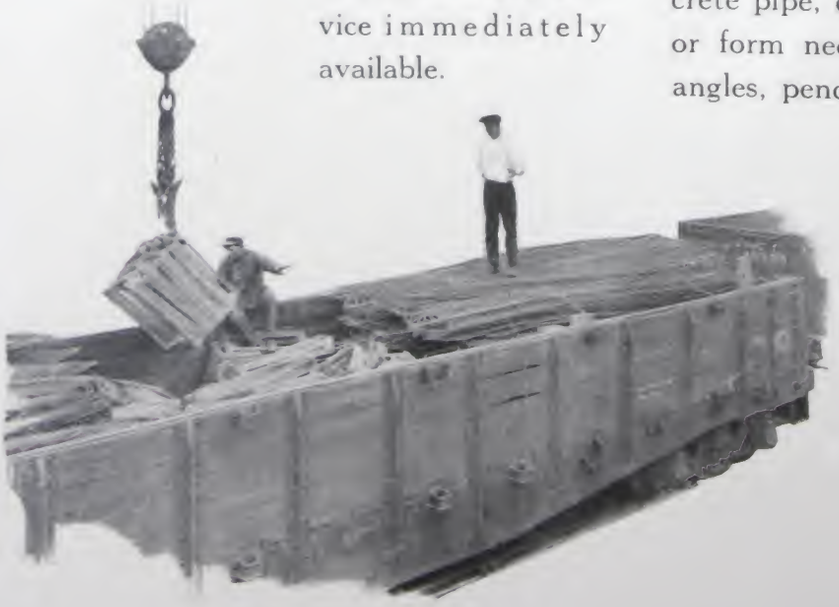
JOSEPH T. RYERSON & SON INC.

CHICAGO ST. LOUIS CINCINNATI DETROIT BUFFALO NEW YORK



Ryerson Reinforcing Service

TEN THOUSAND TONS of plain and deformed reinforcing bars on hand at one of our warehouses. There are six of these great warehouses in different parts of the country, ready to serve all sections. Offices in many cities, and representatives everywhere make this Reinforcing Service immediately available.



In addition to our heavy tonnages of reinforcing bars, we carry complete stocks of all accessories, such as beam, joist and slab bar spacers, bar and screed chairs, tie chairs, etc.

Wire fabric and expanded metal for reinforcing roadways and for floor slabs, concrete pipe, etc., is shipped out in any size or form needed. Our stock of channels, angles, pencil rods, etc., enable us to give exceptional service when material is required for suspended ceilings, furring and similar purposes.

Metal road strips as used for longitudinal, center joints of concrete roads in Illinois, Michigan and other states, can be furnished in any quantity, complete with head-

less pins and the reinforcing bars used with these road strips.

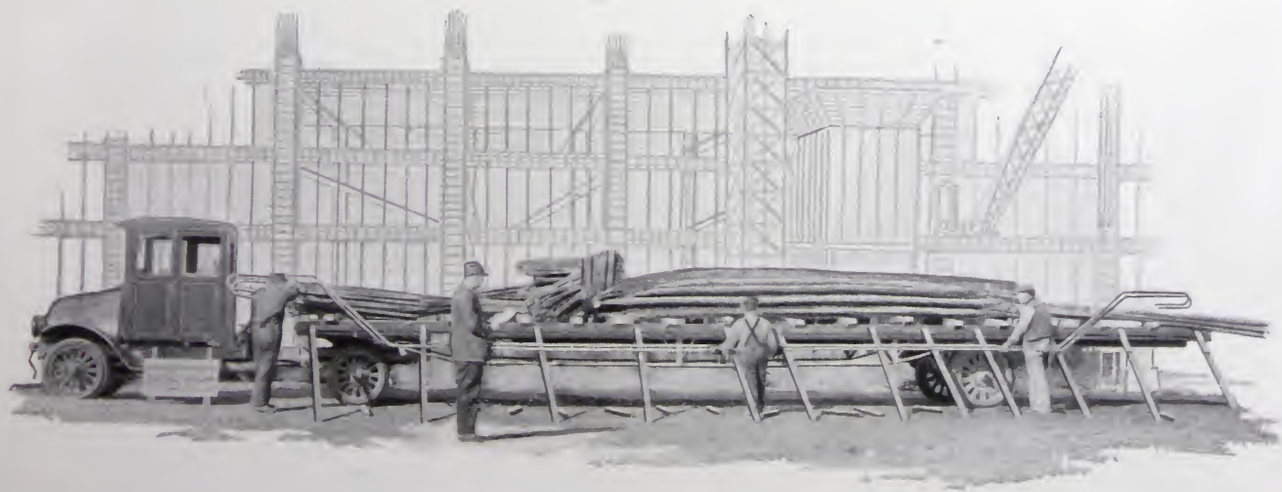
Bending — Fabricating

We have the most up-to-date machinery and other equipment for fabricating, and can bend bars to any shape on power benders, to form beam, joist and slab rods, stirrups, ties, hoops, etc. On our spiral machines we manufacture spirals for round columns, continuous uniform hooping for square and rectangular columns, and continuous, single-unit stirrups for beams and girders.

There is no job of bending or other fabrication which we cannot turn out satisfactorily with our power equipment. Shop fabrication will not delay shipments more than a day or two and the purchaser is relieved of the expense and inconvenience of doing this work in the field. It will pay you to order your reinforcing complete—ready for the forms.

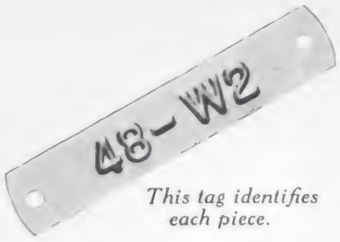
Delivery

By systematic scheduling of orders we are able to furnish and deliver your material as you need it—cut, bent, bundled and tagged, ready for the forms. By the use of special aluminum tags with stamped, raised letters and numerals, the marks showing the location in the building of each bundle can-



Special Ryerson 40 foot Trailer unloading long bent bars and spirals at the job.

not be obliterated. These tags are not subject to rust.



This tag identifies each piece.

Our extensive handling equipment, large fleet of trucks and private switch tracks connecting with trunk line railroads enable us to render service truly unique in the reinforcing field. Specially designed trailers for tractors, with steel adjustable skids, enable us to haul the longest material and unload with a minimum of effort and without distortion or damage to the material of whatever form.

Constant truck deliveries of the many other commodities handled by our warehouses, enable us to deliver even small quantities of reinforcing material at any time of day and to widely separated points without increased expense.

Engineering Service

We maintain a staff of experienced engineers who assist the trade on their reinforcing problems. Lump sum or pound price quotations are made direct from engineer's or architect's plans. When material is ordered we furnish setting diagrams, bar lists, and any details which may be required.

Ryerson Steel-Service

In addition to reinforcing materials we carry all kinds of steel products at each of our six plants, thus giving the contractor a convenient source upon which to draw for such other steel as he may require on a job.

Scene in a Ryerson loading bay, showing reinforcing material ready for shipment.

Deformed and Plain Reinforcing Bars

AT all of our six plants, located in Chicago, St. Louis, Cincinnati, Detroit, Buffalo and New York, we carry large stocks of reinforcing bars—both round and square, plain and deformed.

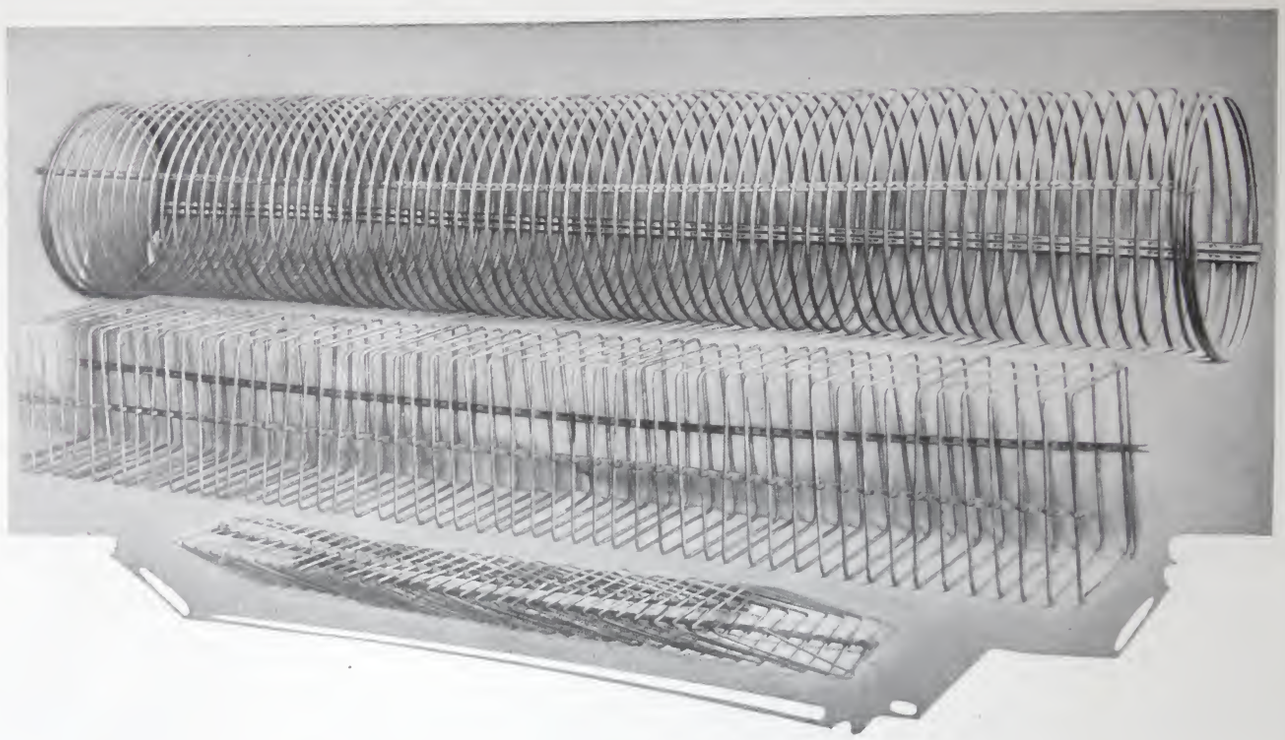
All Ryerson reinforcing bars are rolled from new billets, insuring the highest grade of material. This steel conforms to the standard specifications of the American Society for Testing Materials, Serial designation A-15-14.

Round Deformed Bars

Size in Inches	Weight per Foot	Area, Square Inches	Perimeter in Inches	Net Extra for Size	Stock Lengths in Feet
3/8	0.38	0.11	1.18	.40	20, 30, 40, 50, 60
1/2	0.66	0.19	1.57	.20	20, 30, 40, 50, 60
5/8	1.05	0.30	1.96	.10	20, 30, 40, 50, 60
3/4	1.52	0.44	2.36	Base	20, 30, 40, 50, 60
7/8	2.06	0.60	2.75	Base	20, 30, 40, 50, 60
1	2.69	0.78	3.14	Base	20, 30, 40, 50, 60

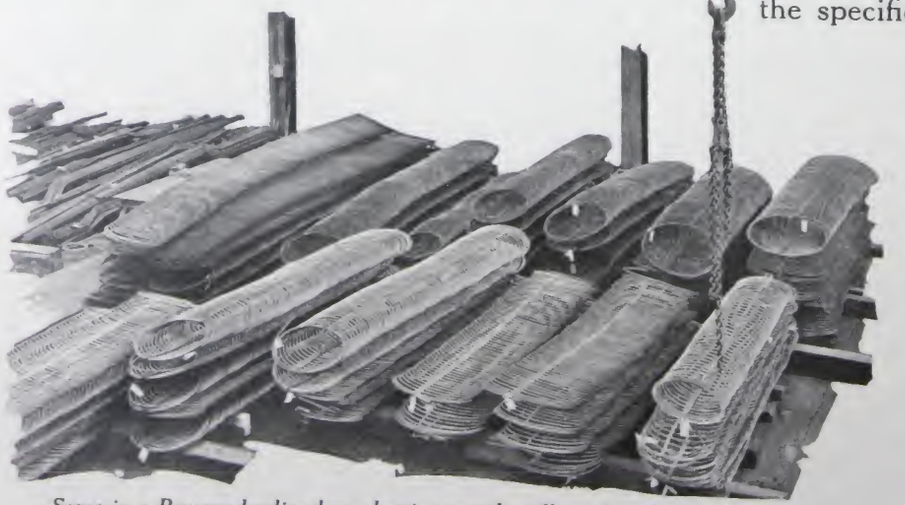
Square Deformed Bars

Size in Inches	Weight per Foot	Area, Square Inches	Perimeter in Inches	Net Extra for Size	Stock Lengths in Feet
1/4	0.22	0.06	1.00	1.00	20, 30, 40, 45
3/8	0.49	0.14	1.50	.40	20, 30, 40, 50, 60
1/2	0.86	0.25	2.00	.20	20, 30, 40, 50, 60
5/8	1.35	0.39	2.50	.10	20, 30, 40, 50, 60
3/4	1.94	0.56	3.00	Base	20, 30, 40, 50, 60
1	3.43	1.00	4.00	Base	20, 30, 40, 50, 60
1 1/8	4.34	1.26	4.50	Base	20, 30, 40, 50, 60
1 1/4	5.35	1.55	5.00	Base	20, 30, 40, 50, 60



Spirals and Continuous Hooping

THE use of spiral reinforcement for columns is shown by tests to greatly increase the ultimate strength and is used very extensively where the longitudinal reinforcement is arranged in circular form. We manufacture such spirals in diameters from eight inches up to forty-eight inches. They are made of new, first quality, wire rod in sizes from three-sixteenths to nine-sixteenths inch inclusive, and to any pitch desired. Special, light channel spacers are provided which permit of collapsing the spiral for shipping purposes, and yet maintain the specified pitch. Two spacers on opposite sides are provided for all spirals of small diameter, but three, and even four, are furnished for large spirals—the extra spacers being attached close to the customary two, and worked around by hand to positions desired when spiral is extended for placing in the forms.



Scene in a Ryerson loading bay, showing spirals, collapsed ready for shipment.

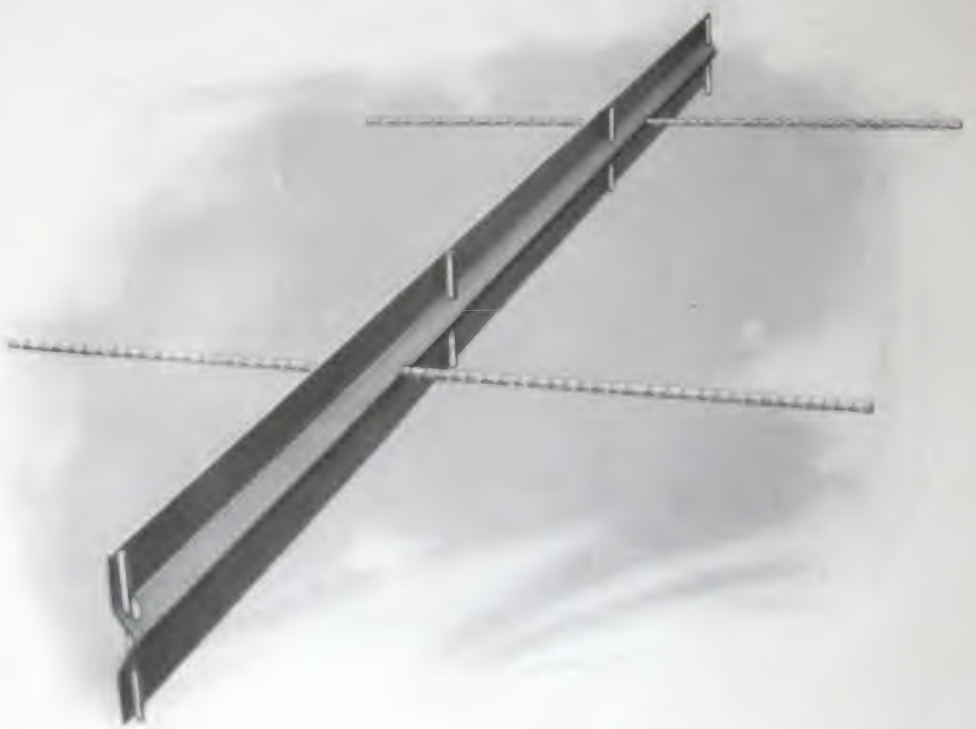
As higher unit values can be used in figuring columns having uniform continuous hooping, it is now the practice in some sections of the country to use continuous hooping for both square and rectangular columns. Tests will show that higher values can be used for the concrete cores of such columns than is possible where common ties are used. The simplicity of assembling the reinforcing in the forms where the hooping is continuous is readily apparent. This square hooping can be collapsed for shipment, in the same manner as round spirals.

We are offering square and rectangular continuous hooping to the trade, believing that there are decided advantages in its use over any form of column ties.

Continuous square or rectangular hooping is readily adapted to use as stirrups in girders. Their application in this manner results in more economical placing of such steel, and also in greater effectiveness of the stirrups, since this system involves no consideration of minimum embedded length above the neutral axis and gives a perfect system of stirrup reinforcement which cannot be displaced by carelessness or accident.

Our equipment for making these spirals is of the latest improved design. Our stock of spacer channels and spiral rod is the largest in the country. This combination of equipment and supply of materials gives the contractor a reliable source for spirals that can be depended upon under all conditions.

Assembling Spirals in a Ryerson Reinforcing Plant



Metal Road Strips

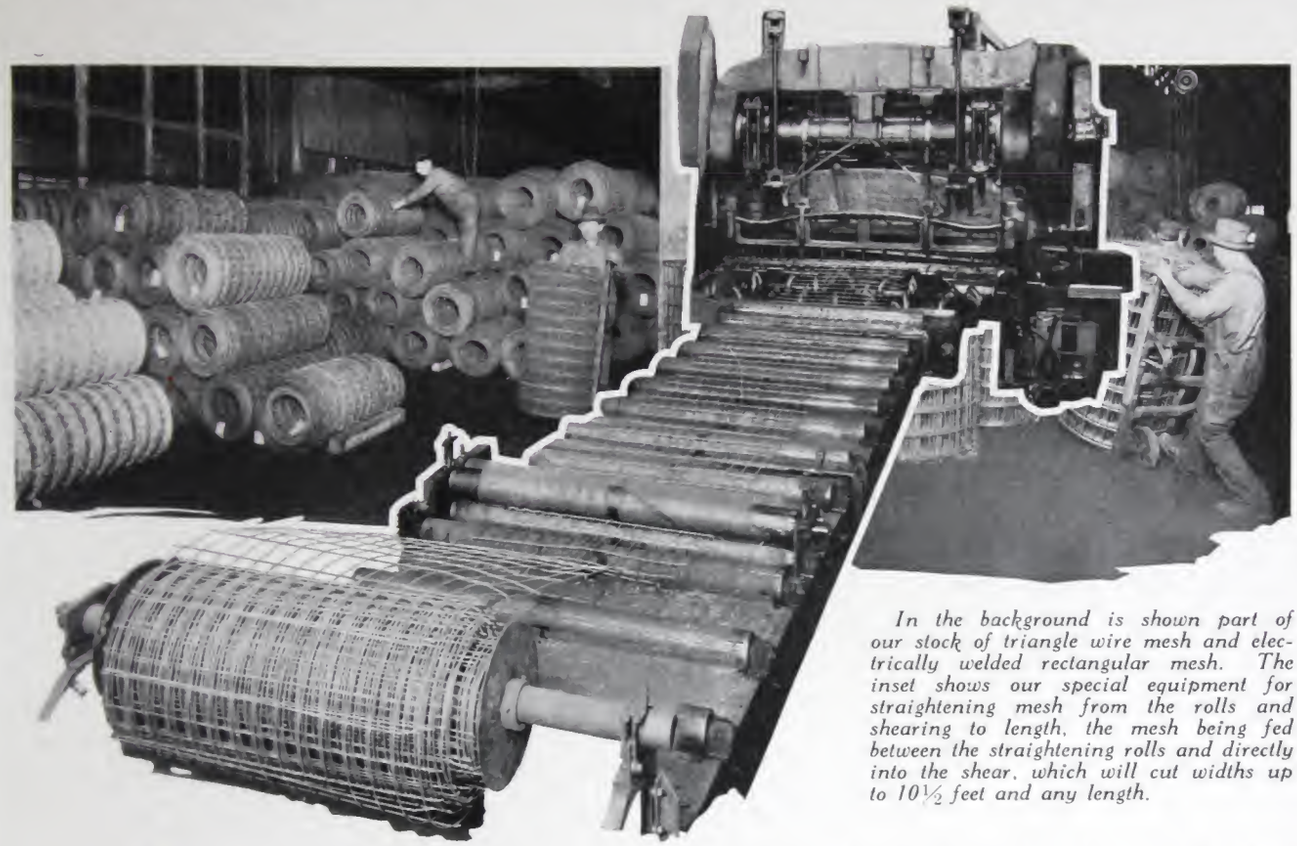
TESTS conducted on concrete roadways under the direction of the Chief Highway Engineer, Division of Highways, Springfield, Illinois, have shown that there is a pronounced downward warping of the edges of a roadway in the daytime, when the soil has a high supporting capacity, which results in the lifting of the center of an 18-foot pavement entirely free from the sub-grade, thus encouraging the formation of longitudinal cracks.

This is provided for by building a longitudinal joint in the pavement. A sheet metal strip has been developed having a V-groove at the center, which is set on edge lengthwise of the pavement, and held in position by ⅝-inch round pins eighteen inches long, passing through the sides of the V-groove, and into the sub-pavement.

The V-groove serves as a modified dove tail joint uniting the two halves of the pavement and these halves are still further tied together by ½-inch round deformed bars five feet on centers which pass through holes in the metal strip and extend for two feet on either side.

At the edges of the pavement a smooth ¾-inch rod is placed at either side to provide for cracks produced by the curling of the edges of the concrete roadway.

We have furnished many miles of roadway material in accordance with Illinois State Highway specifications and those of other states. Our ability to supply metal road strips and reinforcing; ship completely fabricated material for culverts and bridges; road fabric, supports and spacers, makes our service of particular interest to the hard road builder in any part of the country.



In the background is shown part of our stock of triangle wire mesh and electrically welded rectangular mesh. The inset shows our special equipment for straightening mesh from the rolls and shearing to length, the mesh being fed between the straightening rolls and directly into the shear, which will cut widths up to 10½ feet and any length.

Wire Mesh

We now carry large stocks of Triangle Mesh reinforcement and Electric Welded Fabric and can furnish this material for reinforcing roads and buildings, concrete pipe, concrete posts, concrete garbage receptacles, concrete burial vaults, concrete laundry trays, and for a multitude of other purposes.

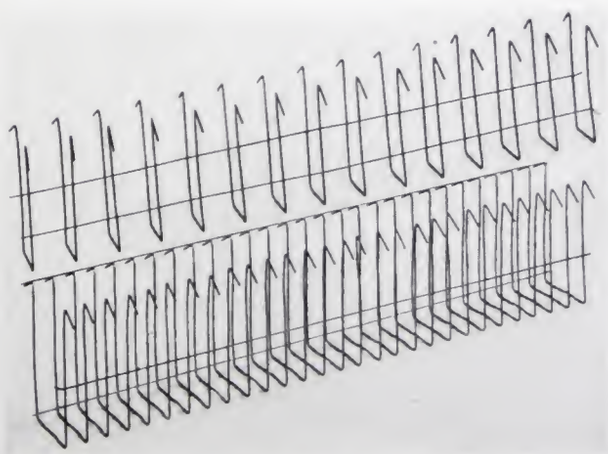
Wire mesh is usually furnished in rolls of standard widths, but we are prepared to cut, straighten, and supply in flat sheets, if desired.

Either plain or galvanized mesh can be shipped promptly.

Continuous Stirrups
Made from Wire Mesh

We have recently developed a machine operated with compressed air, which is capable of bending wire mesh to any form with straight uniform corners and edges and enables us to supply pressed and formed material for any purpose at a great saving in cost over any previously known method.

One purpose for which this machine is especially adapted, is the making of continuous stirrups, using Electric Welded fabric. Rolls of this fabric of any standard

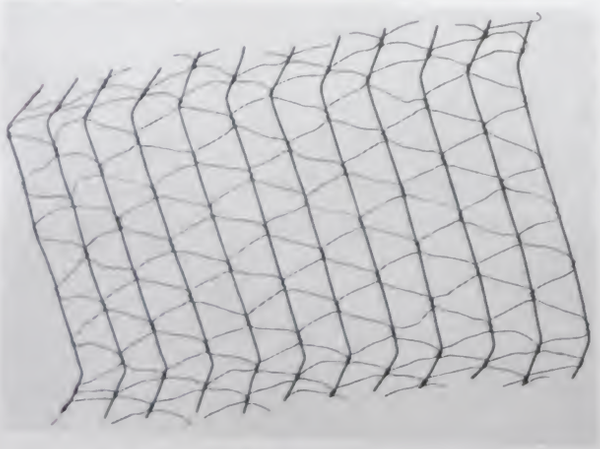


Continuous stirrups, made from electrically welded fabric. In the upper piece, the main wires are spaced 4 inches apart and in the lower, 2 inches apart.

spacing and size of wires and in widths up to 72 inches are cut into any desired width of sheet, in a shear which makes a cut the full size of the roll instantaneously. The cuts are made after the wire mesh has been drawn through electrically driven rolls and rendered absolutely straight and flat.

The mesh is then transferred to the forming machine which presses it into a box shape with the edges turned down to rest on the forms and support the bottoms of the stirrups which carry the beam or joist reinforcement rods, any desired distance above the bottom of the beam or joist, thus doing away with any beam-bar supports or spacers, except possibly at the center of the beam or joist, where there are no stirrups.

All corners of the continuous stirrups are bent straight and in perfect alignment and the width and depth positively maintained. The mesh is sheared so accurately that the tips of the hooks bear uniformly on the slab forms. The simplicity of erection of this type of stirrup, and the supporting of main reinforcement bars without the need of special spacers, or chairs, makes its superiority over individual stirrups, or any other type of continuous stirrup, readily apparent.



Triangle wire mesh, bent for step reinforcement.

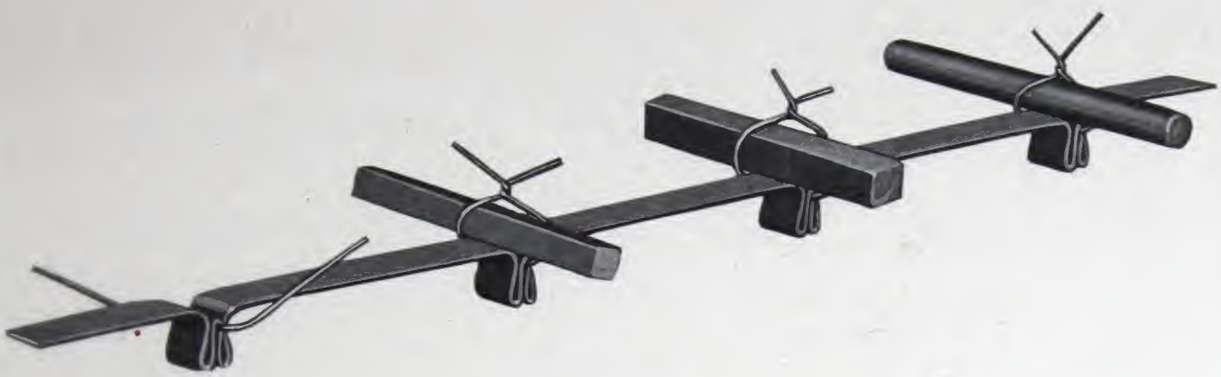
Over 30,000 such stirrups were furnished by us for the new Palmer House at Chicago, Illinois. They are carefully loaded on trucks to prevent interlocking, bending or distortion, and delivered on the job ready for immediate installation.

Among the multitude of uses to which wire mesh has been put is the reinforcement of steps and for this purpose Triangle Mesh is satisfactorily adapted. Thousands of bent sections were recently furnished by us for the new Riding Club of Chicago which were delivered at the job, shaped to conform exactly to the contour of the steps leading to the arena.

The advantage of Power-formed mesh over that usually bent by hand on the job is evident. Beam wrapping can be supplied formed and pressed to suit different widths of beam flanges and corrugated so as to maintain any required space between the bottom of the beam and the wrapping, thus providing a better material for the purpose than any of the well-known beam clips and making its application at the job a very rapid operation which will reduce the contractor's field costs.

Beam wrapping, to properly hold concrete to steel and provide effective fire-proofing, should be of mesh with wires uniformly spaced so as to permit concrete to flow around them and yet serve as a proper binder. When properly shaped and attached, it is the most satisfactory material known for the purpose.

We are prepared to furnish wire mesh in any shape it may be required. Just submit your problem to us.



Lower Slab Bar Spacer

Upper Slab Bar Spacer

UNIVERSAL SLAB BAR SPACER

UNIVERSAL SLAB BAR SPACERS space the bars the correct distance from the bottom of the form and from each other. They also tie every bar in its proper place.

ALL UNIVERSAL SPACERS are made up for the exact conditions as provided for in the plans. All spacers are tagged with designating marks to show your workmen exactly in what portion of your work they are to be used.

UNIVERSAL SPACERS will speed up your steel laying.

Note the double fold of metal directly under the center of the bar. A bar will not wedge its way down to the form when walked upon. The wire affords the quickest and best form of tie. There are no stiff metal arms to bend and no legs or supports to fall off. The metal is not cut at any place, it is simply folded—eliminating any sharp edges on which the workman could get cut.

UNIVERSAL SPACERS held the bars in place on this job. Note how uniformly the bars are spaced. They are in the exact positions called for on the plans. Every bar has a place and is securely tied in position against displacement. Any amount of walking on bars, and other abuse will not dislodge them if they are tied and supported with UNIVERSAL SPACERS.

When you use UNIVERSAL SPACERS, remember they simplify your steel laying and in this way more than save their cost by the labor they save. When UNIVERSAL SPACERS are used, one glance at the slab steel will show whether or not all the required number of bars are in position as called for in the steel plans.

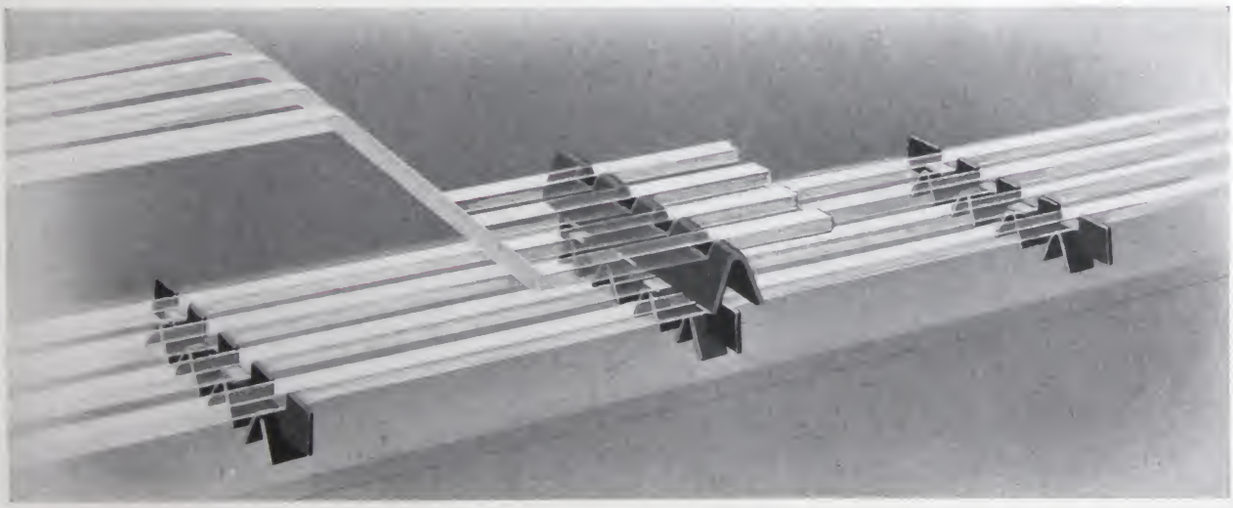
Note the use of UNIVERSAL HIGH CHAIRS around column heads and in direct bands of bars. The chairs are nailed in position preventing their displacement.

Insert the following paragraph in your specifications:

"All reinforcing steel shall be supported the proper distance from the bottom of the form, shall be spaced the correct distance center to center and shall be securely tied in position against displacement by means of UNIVERSAL BAR SPACERS, as made by the Universal Form Clamp Co. of Chicago, Ill."

Style C

Style E

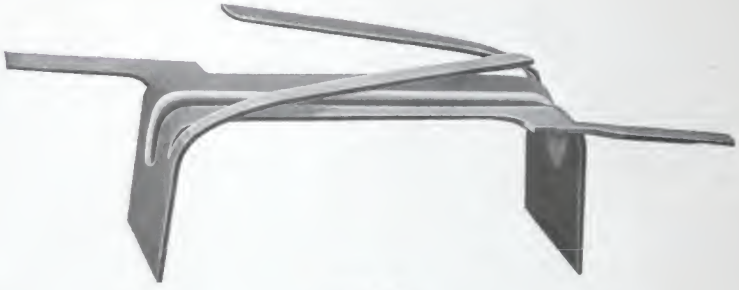


UNIVERSAL BEAM BAR SPACER

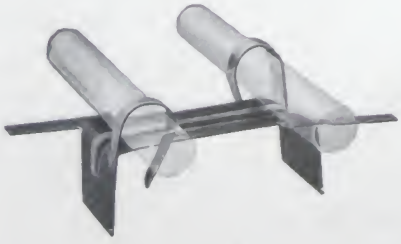
Every bar has a definite notch to lay in, and it cannot be dislodged by any motion sideways. Note the shelf under every bar. They are bent out alternately, and this feature adds to the stability of UNIVERSAL BEAM BAR SPACERS and aids them to resist tipping over when the bars are pulled back and forth in the beams. When ordering, specify style desired, height, width of beam and number of bars in each layer.

Style E Spacer has no connection with Style C Spacer. It simply lays on top of the lower bars and can be placed in position anywhere along the top of bottom bars.

Style A



Style B



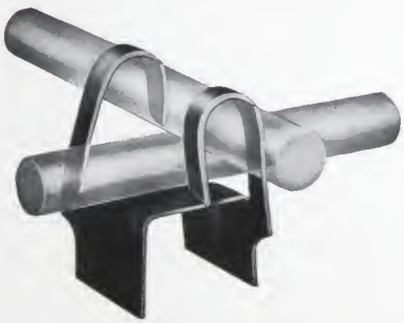
UNIVERSAL JOIST BAR SPACER

UNIVERSAL JOIST BAR SPACERS are furnished in two forms. These joist bar spacers are adaptable to any type of ribbed floor construction, and are made to carry one or two bars. See page 13 for widths and heights of two styles.

UNIVERSAL JOIST BAR SPACERS are designed the same as all other UNIVERSAL products, and that is for strength and simplicity.

Bar Chair

High Chair



UNIVERSAL BAR CHAIRS

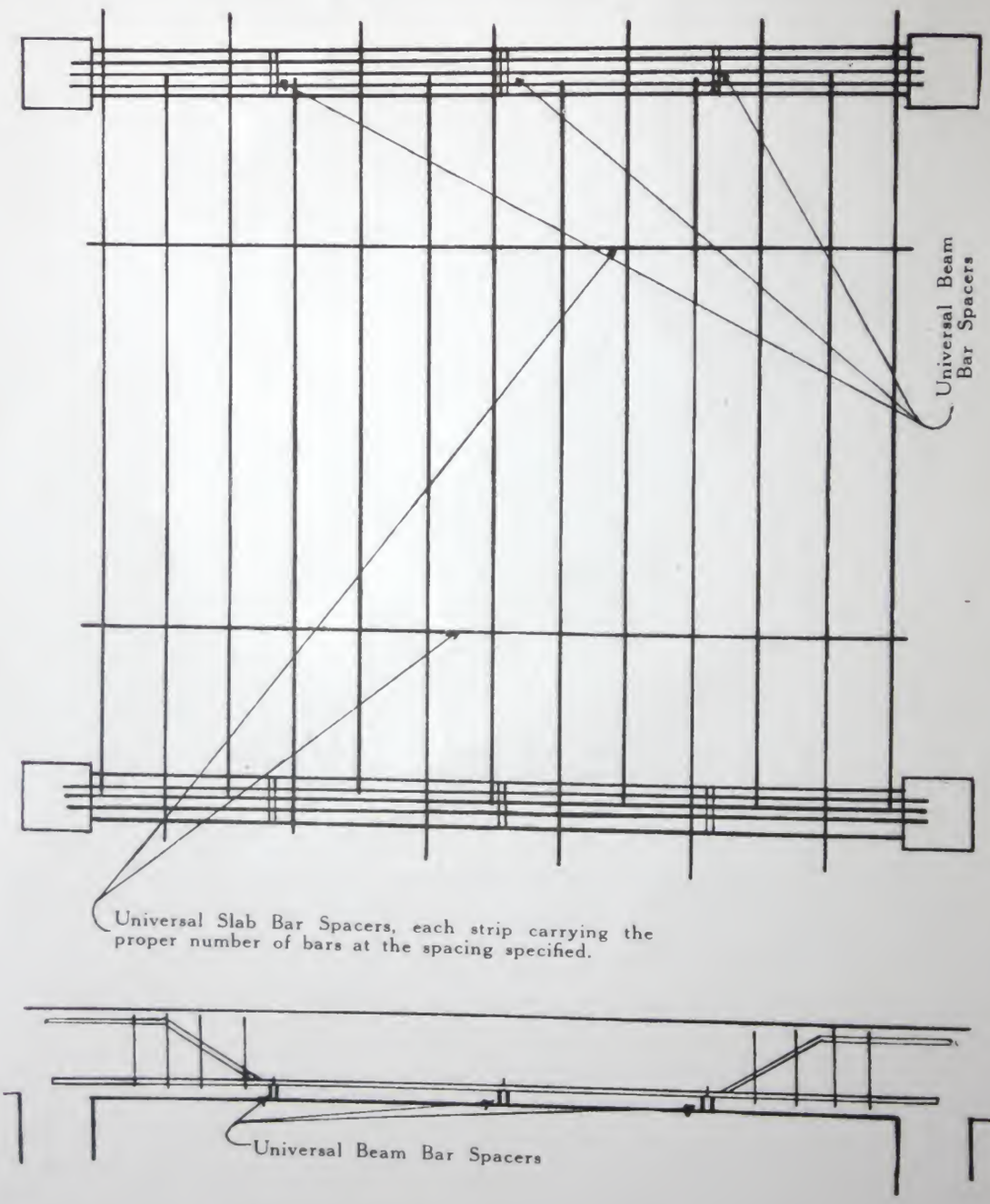
UNIVERSAL HIGH CHAIRS were designed for the purpose of filling a long-felt want for supporting bars around column heads and top bars in direct belts of bars. The old method of concrete blocks is costly and cumbersome. There are enough necessary details to a construction job in the field without adding some that are unnecessary, which is the case when a contractor makes up concrete supporting blocks.

One look at a UNIVERSAL HIGH CHAIR convinces you that they have strength. The notches at the bottom are provided for nails; the shelves under the bar stabilize the chair against lateral movements which will either tip over or crush ordinary chairs; the holes are there if you want to wire the bars to the chair. High Chairs are furnished for exact height called for in your steel plans.

Compare the cost of distributing an armful of high chairs as against heavy concrete blocks. Either eight or ten chairs are necessary around column heads. When chairs are once nailed in position they will stay put.

Typical Method of Placing
UNIVERSAL SLAB BAR SPACERS for Slab Bars in panels in which the bars run in one direction only.

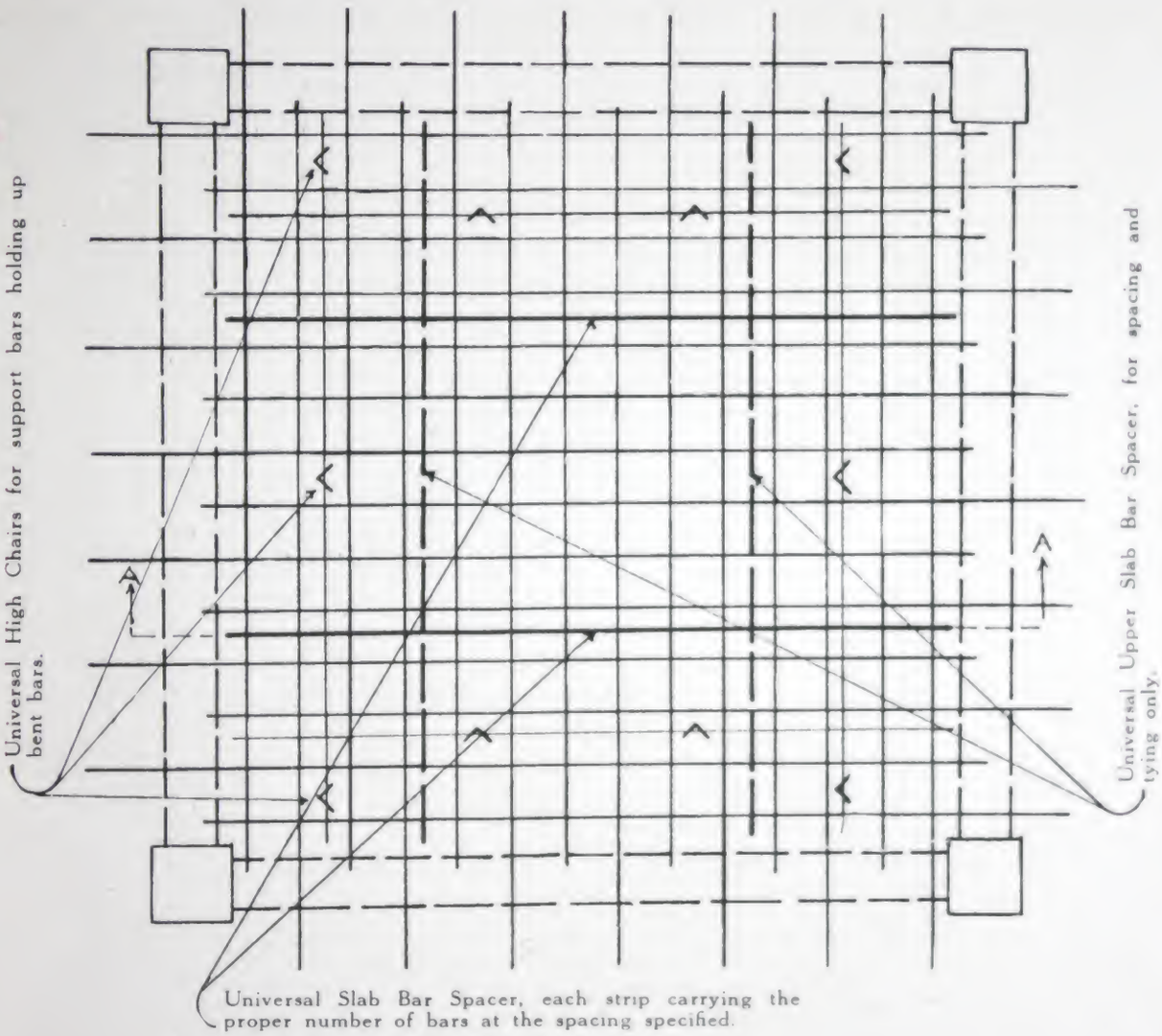
UNIVERSAL BEAM BAR SPACERS Shown Below

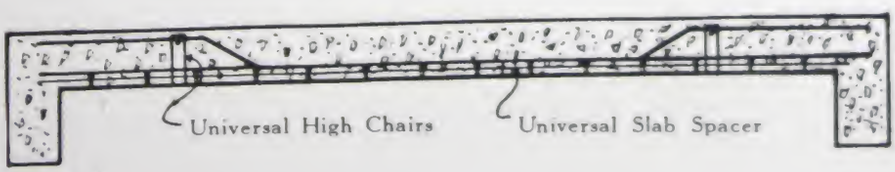


Use two strips of Universal Slab Bar Spacer per panel except when panel width is over 16′. Then use three strips.

Use two Universal Beam Bar Spacers in beams of sixteen foot span or under. Use one additional Beam Spacer for each additional six feet of span over sixteen feet.

Typical Method of Placing
UNIVERSAL SLAB BAR SPACERS and HIGH CHAIRS for Slab Bars in panels in which the bars run in two directions.





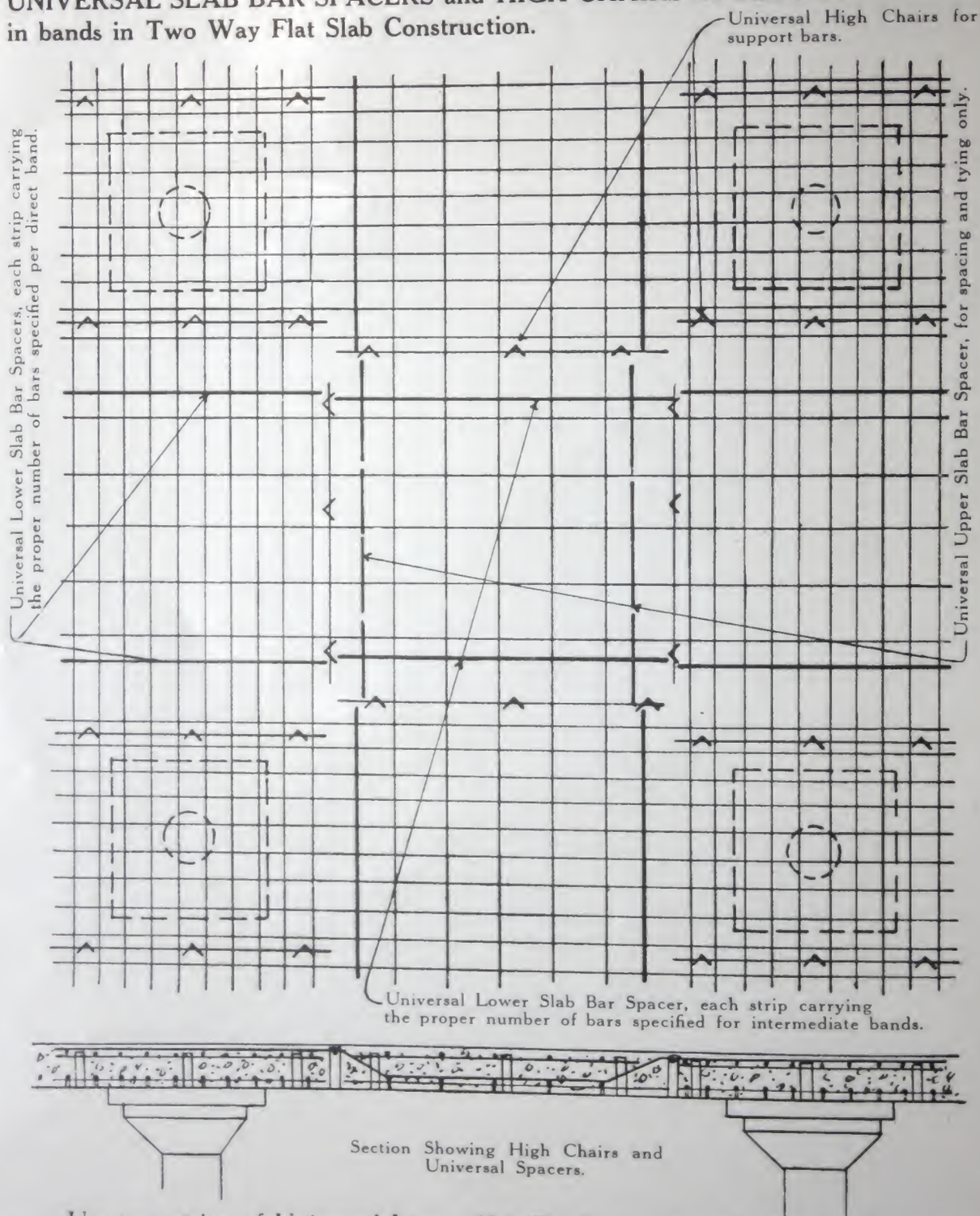
Section A-A

Use two strips of Universal Lower Slab Bar Spacer per panel except when panel width is over sixteen feet. Then use three strips.

Use two strips of Universal Upper Slab Bar Spacer per panel for upper layer of bars, when it is desired that these bars be accurately spaced. They are already supported by the lower layer of bars.

Use Universal High Chairs at not more than six feet on centers.

Typical Method of Placing UNIVERSAL SLAB BAR SPACERS and HIGH CHAIRS for Slab Bars in bands in Two Way Flat Slab Construction.



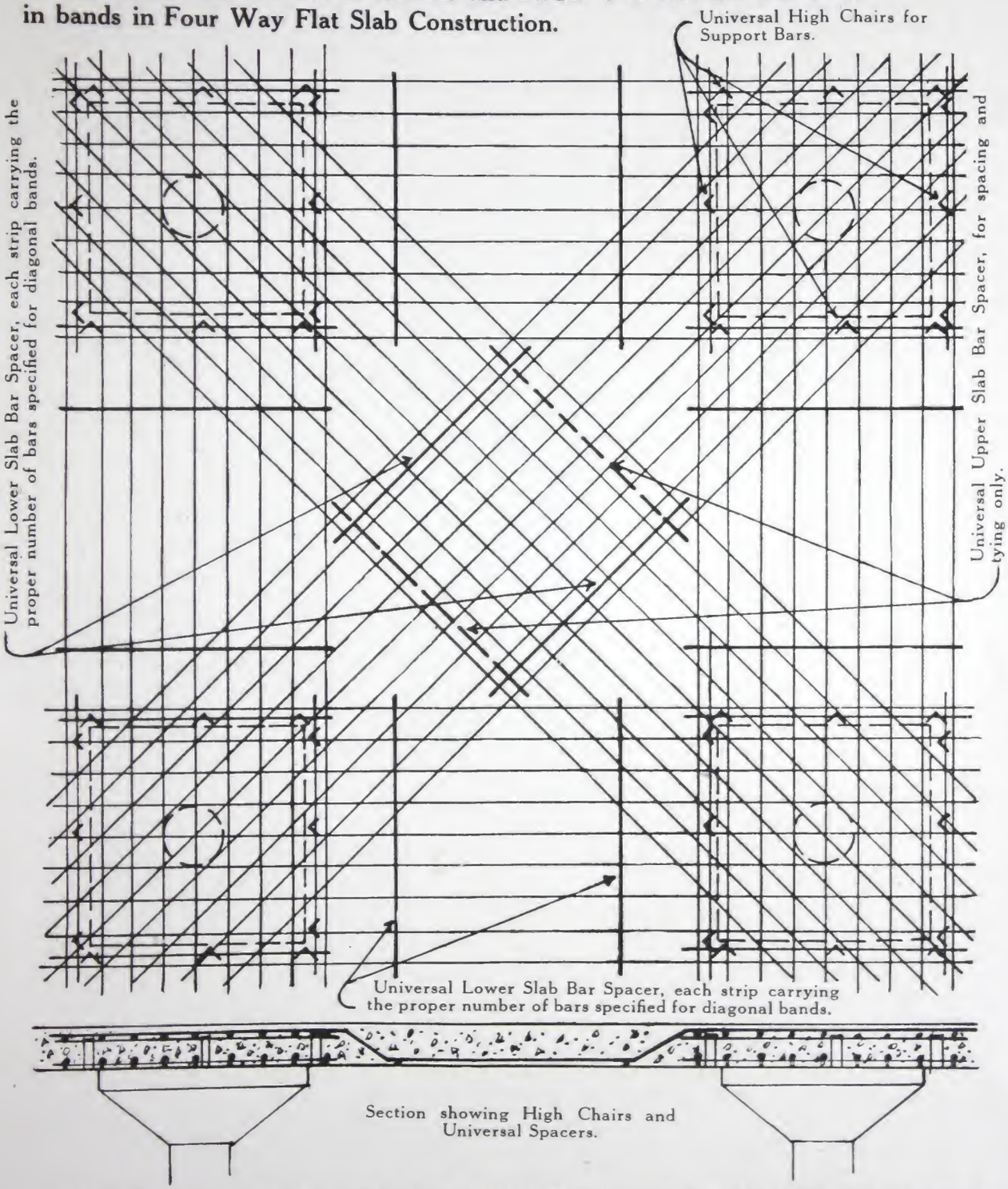
Section Showing High Chairs and Universal Spacers.

Use two strips of Universal Lower Slab Bar Spacer in each direct and intermediate band of bars, except in unusually large panels, where three should be placed.

Use two strips of Universal Upper Slab Bar Spacer for upper layer of bars in intermediate bands, when accurate spacing is desired. These bars are already supported by the bars below.

Use three Universal High Chairs per support bar. Where intermediate band is light, two High Chairs per support bar are sufficient for those bands.

Typical Method of Placing
UNIVERSAL SLAB BAR SPACERS and HIGH CHAIRS for Slab Bars in bands in Four Way Flat Slab Construction.



Section showing High Chairs and Universal Spacers.

Use two strips of Universal Lower Slab Bar Spacer in each direct and diagonal band of bars, except in unusually large panels, where three should be placed.

Use two strips of Universal Upper Slab Bar Spacer for upper layer of bars in diagonal bands when accurate spacing is desired. These bars are already supported by bars below.

Use three Universal High Chairs per support bar. Where bars are light, two support bars with three High Chairs each, or four support bars with two High Chairs each are sufficient at column heads.

UNIVERSAL SCREED CHAIR

There has been a consistent need for a strong chair to support the screeds used in connection with floor slabs. The above chair has been offered to contractors only after extended experiments and trials in work under actual construction have proved its strength and value.

The Screed Chair is made on the same general principle as Universal High Chairs. It is nailed to the form by means of the notches at the bottom, and is held firmly in place while the concrete is being poured. For the screed a metal bar 5/16"x2" is used, resting in the top notches provided for it. From two to four chairs per screed are necessary, depending on its length.

After the screed is no longer required, the bar is removed, and leaves practically no depression in the slab, which is not the case when a thick wooden screed is used. The screed bars can be used over and over, while the chairs remain in the slab. A trial of these Screed Chairs will prove their economy and efficiency.

DATA ON SPACERS AND BAR CHAIRS

Slab Bar Spacers

Lower Slab Bar Spacers are made to give a clearance between the bottom of the steel, and the form of ½", ¾", 1", 1¼" and 1½". The first three heights are standard, an extra charge being made for the 1¼" and 1½" heights.

The minimum spacing of bars for standard heights is 2", for special heights 4". The length of strip is limited to about 20', due to the difficulty in handling and shipping longer strips.

Upper Slab Bar Spacer

The minimum spacing on Upper Spacer is 4". The maximum length is the same as for the Lower Slab Spacer.

Beam Bar Spacers

Beam Bar Spacers, Type C, for lower or single layer of bars in beams, are made in two standard heights, to give 1½" and 2" clear between the bottom of the steel and the form. Special heights up to 3" can be furnished at an additional cost. The above also applies to Type E, except that standard distance between layers of bars is 1".

Joist Bar Spacers

Joist Bar Spacers are made in the following widths and heights, the latter being from bottom of steel to form:

Style	Width	Height	No. of Bars
A	6"	1"	2
A	5"	1" & ¾"	2
A	4"	1" & ¾"	1 & 2
B	5"	1", ¾", ½"	2
B	4"	1", ¾", ½"	1 & 2

We recommend Style A Spacers for general use.

Bar Chairs

Individual Bar Chairs are stocked as follows:

No.	Height	Take Bar
2	¾"	1"
3	1"	1½"
3	1½"	1½"
3	2"	1½"

High Chairs and Screed Chairs can be furnished in any height.

WEIGHTS OF BAR SPACERS AND CHAIRS

Lower slab bar spacers	Wt. per 1000 ft.	235 lbs.
Upper " " "	" " " "	150 "
Beam bar spacers Style C	" " " "	500 "
" " " " E	" " " "	650 "
Joist " " " A—5"	" " 1000 pcs.	200 "
" " " " A—4"	" " " "	160 "
" " " " B—5"	" " " "	100 "
" " " " B—4"	" " " "	85 "
Bar chairs ¾" high	" " " "	60 "
" " 1½" "	" " " "	85 "
" " 2 " "	" " " "	100 "
High " 6 " "	" " " "	380 "
Screed " 6 " "	" " " "	390 "

Extra charges made for crating spacers for express shipment.

UNIVERSAL PLAIN BAR-TIE

Patented May 30, 1916
No. 1185263

A Better, Quicker and More Economical Way of Tying Together Your Reinforcement

These **Ties** are applied at one-fourth the labor cost of the ordinary method of tying, and they are infinitely better. A green man, one of your day laborers, can tie together twenty intersecting bars per minute from the start.

The Ties are suitable for tying together the following combinations of intersecting bars, whether round, square, square twisted or deformed, or any combination of one style with another. **If bars are square or square twisted figure the combined diameter ¼ inch more than the actual size.**

PLAIN TIES:

Size No. 1—For tying two intersecting bars, the combined diameter of which is not greater than 1 inch, as follows: ⅜x¼, ⅜x⅜, ½x¼, ½x⅜, ½x½.

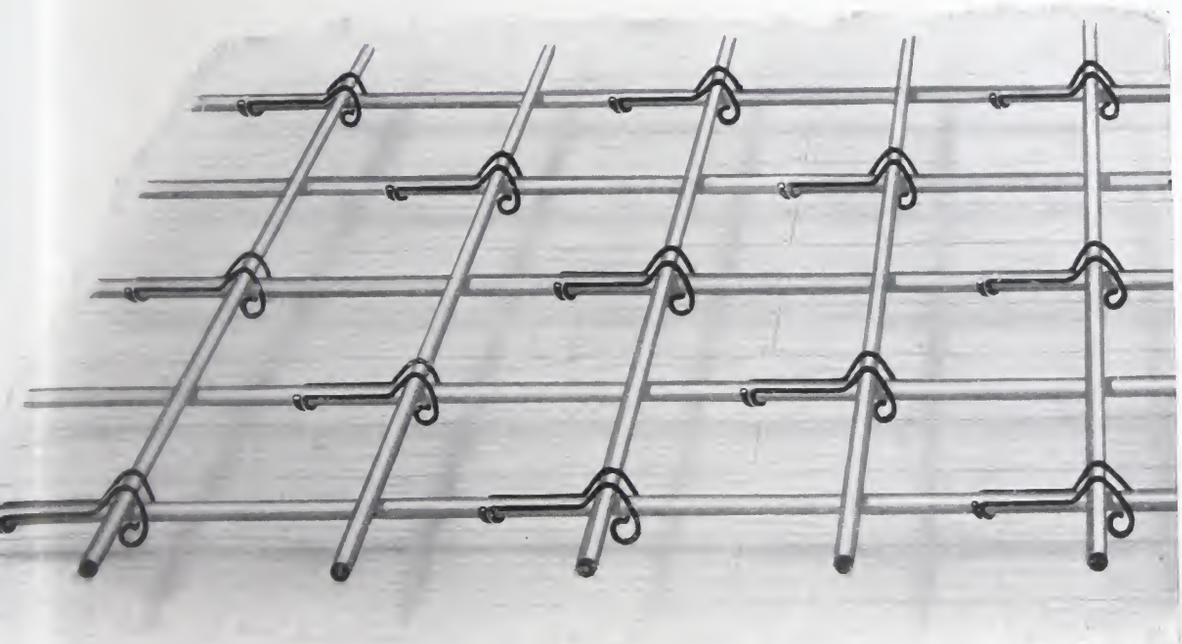
Size No. 2—For tying two intersecting bars, the combined diameter of which is not less than 1 inch nor greater than 1⅜ inches, as follows: ½x½, ⅝x¼, ⅝x⅜, ⅝x½, ⅝x⅝, ¾x⅜, ¾x½, ¾x⅝.

Size No. 3—For tying any two intersecting bars, the combined diameter of which is not less than 1¼ inches nor more than 1⅝ inches, as follows: ¾x½, ¾x⅝, ¾x¾, ⅞x⅜, ⅞x½, ⅞x⅝, ⅞x¾, 1x⅜, 1x½, 1x⅝.

Let us send you by Parcel Post, and without obligation, enough samples for a practical try-out. (In ordering, state size required.)

UNIVERSAL TIE CHAIR

Patented January 30, 1917
No. 1213919



These Ties are made of High Carbon Spring Wire. They lock the bars rigidly together, nd properly space them from the forms. This Universal TIE CHAIR enables you, without dditional cost, to observe order and system in the placing and tying of reinforcement.

Only two sizes required for 14 different Combinations in sizes of bars.

E CHAIRS:

ze No. 1—For tying and supporting any two intersecting bars, the combined diameter of which is not greater than 1 inch, as follows: ½x¼, ½x⅜, ½x½, ⅝x¼, ⅝x⅜, ¾x¼.

ze No. 2—For tying and supporting any two intersecting bars, the combined diameter of which is not less than 1⅛ inch nor more than 1⅜ inches, as follows: ⅝x½, ⅝x⅝, ¾x⅜, ¾x½, ¾x⅝, ⅞x⅜, ⅞x½, 1x⅜.

A Few Represenative Buildings on which Ryerson Reinforcing was used.

Building	Place	Contractors
Watkins Medical Co. (1200 tons)	Newark, N. J.	B. H. Stahr Co.
Morrell St. Power Station (1150 tons)	Detroit, Mich.	H. G. Christman Co.
Kalamazoo Vegetable Parchment Co. (900 Tons)	Kalamazoo, Mich	H. L. Van der Horst
Palmer Estate Bldg. (800 tons)	Chicago, Ill	R. F. Wilson Co.
New Palmer House (2100 tons)	Chicago, Ill	Thompson-Starrett Co.
Hudson County Boulevard Bridge (800 tons)	Jersey City N. J	Stillman-Delehanty-Ferris Co.
Edgewater Beach Hotel (750 tons)	Chicago, Ill	Marshall & Fox
Murphy Transfer Warehouse	Minneapolis, Minn	James Peterson
Bates Valve Bag Co	Chicago, Ill	E. L. Archibald Co.
Tulsa Power Plant	Tulsa, Okla	Adams Construction Co.
Kentucky Utilities Co	Pineville, Ky	The Foundation Co.
Roberts & Oake, Packing Plant	Chicago, Ill	Jacob Rodatz
Sheridan Trust & Savings	Chicago, Ill.	R. C. Wieboldt Co.
Northwestern States Portland Cement Co	Mason City, Iowa	McDonald Eng. Co.
Parcel Post Sub-Stations	Detroit, Mich	Everett Winters Co.
S. D. Childs & Co. Building	Chicago, Ill	Schmidt Bros. Const.
Agricultural Building, U. of I	Urbana, Ill	H. B. Krauel
Harrison Park School	Grand Rapids, Mich.	John McNabb & Son
LaSalle Garage	Chicago, Ill	Geo. A. Fuller Co.
Southmoor Hotel	Chicago, Ill	B. W. Const. Co.
Studebaker Corp. Body Plant No. 2	South Bend, Ind	H. G. Christman Co.
Roosevelt Road Viaduct	Chicago, Ill	City of Chicago
Alton National Bank	Alton, Ill	James Stewart & Co.
Reserve Loan Life Building	Indianapolis, Ind	W. P. Jungclaus
Middle West Utilities	Dix Dam, Ky	L. E. Myers Co.
Fair Store Alterations	Chicago, Ill	John Griffiths & Son
Garrett Biblical Institute, Northwestern University	Chicago, Ill	Avery Brundage
Sparta High School	Sparta, Wis	Naset Brothers
Mishawaka Woolen Manufacturing Co	Mishawaka, Ind	H. G. Christman Co.
Michael Reese Hospital (Training School for Nurses)	Chicago, Ill	Geo. Thomson & Son Co.
Grant Park Stadium	Chicago, Ill	Blome-Sinek Co.
Chillicothe High School	Chillicothe, Mo	Chillicothe Mach. & Fdr.
United Light & Power Co	Davenport, Iowa	United Light & Power
Girls' Dormitory, St. Mary's Academy	Notre Dame, Ind	H. G. Christman Co.
Vandever Building Corporation	Tulsa, Okla	Rucks & Brandt
Superior Telephone Exchange	Chicago, Ill	Dahl-Stedman Co.
Chicago Riding Club	Chicago, Ill	Bulley & Andrews
Hollander Warehouse	Chicago, Ill	Anderson & Nelson
Power House, Kitchen and Dining Hall, University of Illinois	Urbana, Ill	C. A. Moses Const. Co.
Sovereign Hotel	Chicago, Ill	B. W. Const. Co.
West Side Garage Bldg	Detroit, Mich	H. G. Christman Co.
General Electric Co. Building	Detroit, Mich	H. G. Christman Co.
Tower Garage	Chicago, Ill	Avery Brundage

We furnish reinforcing for all kinds of road work, including bridges and culverts. A few well known users of this class of material are shown below.

A. J. Smith Construction Co., Detroit, Michigan	Michigan Road Work
R. F. Conway Co., Chicago, Illinois	Illinois Road Work
Fuller-Hiller Hardware Co., Muscatine, Iowa	Iowa Road Work
State of Arizona	Arizona Road Work
Indiana Road Paving Co., Rochester, Ind	Illinois Road Work
Building Maintenance Corporation, Detroit, Mich	Michigan Road Work
Kalamazoo Paving Co., Kalamazoo, Mich	Michigan Road Work
Roth Bros. & Akers, Ottumwa, Iowa	Illinois Road Work
McMahan Consruction Co., Rochester, Ind	Illinois Road Work